

A New Species of *Arundinella* Raddi (Poaceae) from Kerala, India

T. Shaju and N. Mohanan

Tropical Botanic Garden and Research Institute, Palode, Thiruvananthapuram 695 562, Kerala, India.

Abstract

A new species, *Arundinella ravii*, is described and illustrated. The species differs from its closely allied species, *A. pumila* (Hochst. ex A. Rich.) Steud., in having shorter culms, strictly glabrous nodes, one nerved and one keeled lower and upper glumes, shortly notched lower lemma, deeply bifid upper lemma, smoothly margined lower palea and lanceolate upper palea.

Keywords: *Arundinella ravii*, New grass, Eravikulam, Kerala

Introduction

The authors collected an interesting specimen belonging to the genus *Arundinella* from Eravikulam National Park, also known as the 'Hamilton Plateau', located along the Western slopes of the Anamudi. A critical examination revealed that the specimen was distinct from the hitherto known species of the genus. On consultation, Dr. Thomas A. Cope of the Royal Botanic Gardens, Kew, informed that the specimen did not match with any of the known species in the genus and it could not be accommodated within the known range of variation of *Arundinella pumila* (Hochst. ex A. Rich.) Steud. The specimen is described here as a new species

The genus *Arundinella* Raddi has about 55 species distributed in the tropics, mainly in Asia (Clayton & Renvoize, 1986). With the present addition, the genus is represented by 19 species in India, of which 11 are found in Kerala (Bor, 1948, 1955; Fischer, 1934; Hooker, 1896; Sreekumar & Nair, 1991).

Arundinella ravii Shaju & Mohanan *sp. nov.*
Fig. 1.

A. pumila (Hochst. ex A. Rich.) Steud. affinis, sed differt planta parva et valde exilis, nodus glabrus, folia linearis, ligulae truncatae, inflorescentia dichotome ramose, glumae superiora et inferiora uninervis et lemma secundarius bifida, aristae ad 0.5 mm longae.

Type: INDIA, Kerala, Idukki District, Eravikulam National Park \pm 1880 m, 8.11.2000 Shaju 43700, (Holotype, TBGT; Isotypes, MH, CALI).

Arundinella ravii is allied to *A. pumila* (Hochst. ex A. Rich.) Steud., but distinct in being smaller and more slender in habit, with strictly glabrous nodes, linear leaf blades, truncate ligules, much dichotomously branched inflorescence, single nerved lower and upper glumes and deeply bifid second lemma with upto 0.5 mm long aristae.

Small annuals; culm slender, tufted, 15 – 20 cm tall. *Leaves* 2-10 cm long, narrowly linear, acuminate. *Inflorescence* terminal, pyramidal to dichotomously branched panicles. *Spikelets* small, 1.5 – 2 mm long, on filiform branches; lower glume subcoriaceous, hyaline, ovate-lanceolate, 1.5–2 mm long, 1-nerved, keeled on the back along the nerve, acute at apex, scaberulous on the margins, prominently so towards the apex; upper glume equal to or a little shorter than the lower glume, more or less similar to it, but more prominently scaberulous on the margins and sparsely scabrid on the keel; lower lemma thickly coriaceous, lanceolate, 3-nerved, 1-1.25 mm long, incurved on the sides, shortly notched and mucronate at apex, sparsely bearded at base and minutely scaberulous on the outside; lower palea subcoriaceous, hyaline, linear-lanceolate, 0.75 mm long, incurved on the sides, shortly notched at apex; upper lemma thickly

coriaceous, linear-lanceolate, bearded at base, firmly inrolled on the margin, deeply bifid to below the middle with elongate and aristate lobes, 1.5 mm long including c. 0.5 mm long, scabrid arista awned from the sinus, awn 2.5 mm long with a column up to 1 mm long; upper palea subcoriaceous, hyaline, linear-lanceolate, c. 1 mm long, 2-nerved, incurved outside, shortly notched at apex and scaberulous on the outside towards the apex; stamens 3; anthers c. 0.25 mm long; pistil c. 0.25 mm.

Arundinella ravii grows in wet rocky areas in Eravikulam National Park along with grasses like *Tripogon bromoides*, *Isachne setosa* and *Dicanthium oliganthum*.

Etymology: The species is named after Prof. N. Ravi, the authors' teacher, in recognition of his outstanding contributions in the field of plant taxonomy.

Flowering & Fruiting: August - November

Table 1. Morphological differences of *Arundinella ravii* and *A. pumila* (Hochst. ex A. Rich) Steud.

<i>A. pumila</i>	<i>A. ravii</i>
1 Culms 10- 60 cm high.	Culms 5-20 cm high.
2 Nodes glabrous or sparsely bearded.	Nodes strictly glabrous.
3 Leaves elliptic-lanceolate or linear-lanceolate, acuminate, rounded at base, grooved; ridges smooth, glabrous, rarely with tubercled hairs.	Leaves linear, acuminate, cuneate at base, deeply grooved; ridges scabrous, glabrous, rarely with gland tipped hairs.
4 Ligules truncate, fimbriate at apex.	Ligules truncate or triangular, acute or slightly acuminate at apex.
5 Panicles usually pyramidal.	Panicles pyramidal or dichotomously branched.
6 Lower glume ovate-acute, 1-1.5 mm long, shortly acuminate, chartaceous, 3-nerved, 3-keeled, glabrous to sparsely hairy on the margin.	Lower glume ovate-lanceolate, 1.5-2 mm long, acute, subcoriaceous, 1-nerved, 1-keeled, scaberulous on the margin.
7 Upper glume ovate-lanceolate, 1.5-2 mm long, equal to or slightly larger than the lower glume, acuminate, chartaceous, 5-nerved, 3-keeled, sparsely hairy on the margin.	Upper glume ovate-lanceolate, 1.8-2 mm long, equal to or a little smaller than the lower glume, acute at apex, subcoriaceous to hyaline, 1-nerved, 1-keeled, scaberulous on the margin.
8 Lower lemma ovate-lanceolate or oblong-lanceolate, 1-1.5 mm long, subcoriaceous, 3-5-nerved, narrowly incurved on sides, acute to apiculate at apex, not hairy at base and smooth outside.	Lower lemma lanceolate, 1-1.25 mm long, thickly coriaceous, 3-nerved, incurved on sides, shortly notched and mucronate at apex, sparsely bearded at base and minutely scaberulous outside.
9 Lower palea elliptic, 1 mm long, delicate-hyaline incurved on the sides and sparsely scaberulous on the margin, shortly notched and spinulose at apex.	Lower palea linear-lanceolate, 0.75 mm long, hyaline-subcoriaceous, incurved on the sides and smooth on the margin, shortly notched at apex.
10 Upper lemma elliptic, without arista, 1mm long, notched at apex, scaberulous outside, hairy at base, awned; awn 2-4 mm long with a column upto 0.5 mm long.	Upper lemma lanceolate, aristate, 1.5 mm long including the c. 0.5 mm long arista, deeply bifid at apex, scaberulous outside towards the upper half, bearded at base, awned; awn 2.5 mm long with a column upto 1 mm long.
11 Upper palea oblong, 0.5-1 mm long, delicate-hyaline, scaberulous all over.	Upper palea lanceolate, 1 mm long, hyaline, scaberulous outside towards the apex.

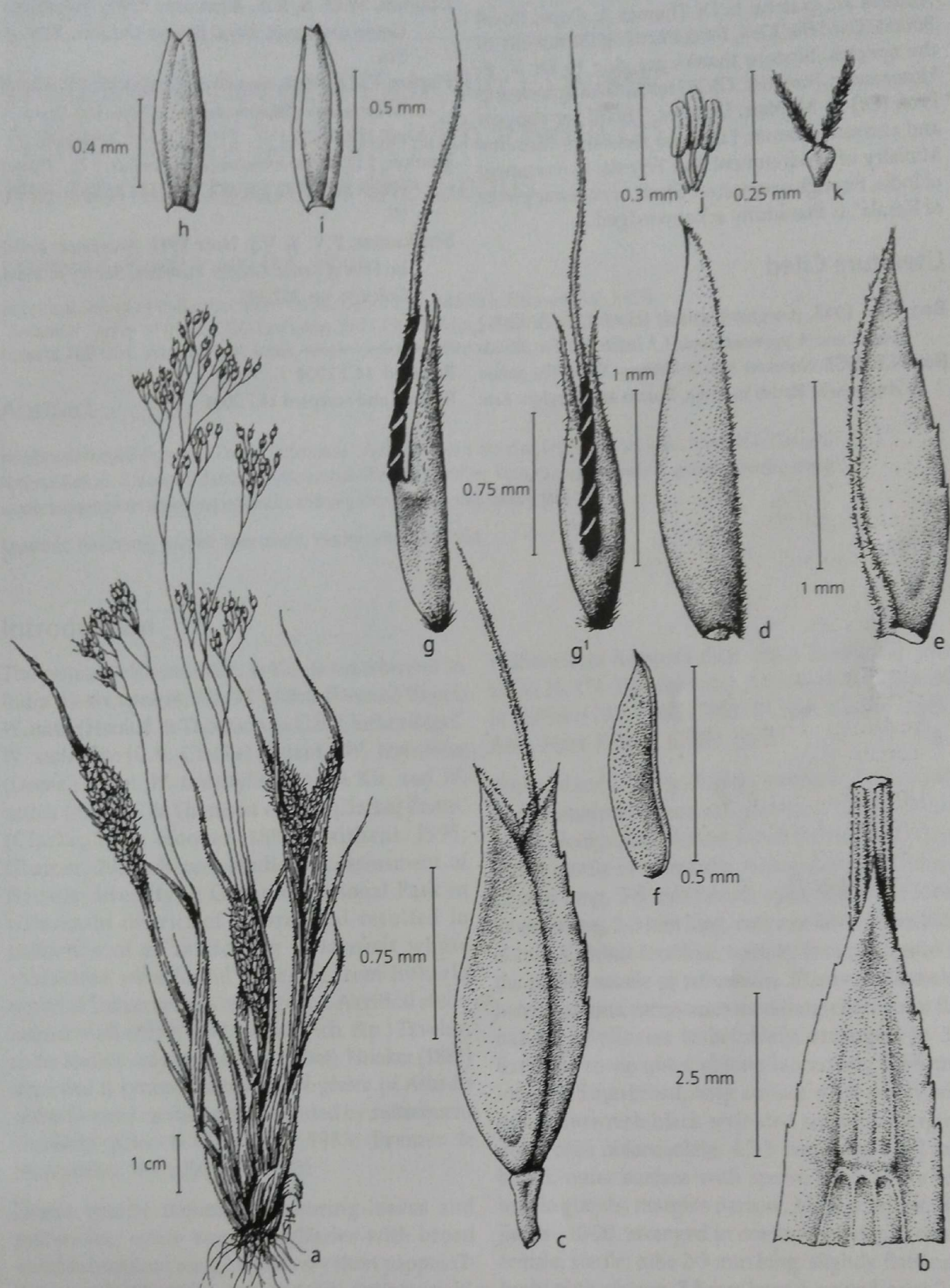


Figure 1. *Arundinella ravii* Shaju et Mohanan sp. nov. – a. Habit; b. Ligule; c. Spikelet; d. Lower glume; e. Upper glume; f. Lower lemma; g & g'. Upper lemma; h. Lower palea; i. Upper palea; j. Stamens; k. Pistil.

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